SUPER MIND EXERCISE

Collected and Designed by

CK JAGDISH

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Cuckoo Clock

Rohit has an antique cuckoo clock. It's a lovely clock but it runs too slowly: it loses 9 minutes of time every hour. Mike visits his friend Rohit one day, and notices that the cuckoo clock is exactly on time at noon on Tuesday.

When is the next time Rohit' clock will be exactly on time?

Answer

The clock will have to lose 12 hours (or 720 minutes) until it seems to be back “on time”. Losing 9 minutes every hour, the clock will take 80 hours (720/9) to lose 12 hours. Eighty hours from noon on Tuesday will be 8:00 pm on Friday.

Two clocks

At midnight on Sunday, December 31st, Professor Lawrence set two of her analog clocks to the correct time. One of her clock gains one minute every hour and the other loses

two minutes every hour.

1.When will the clocks next show the same time as each other?

2.When will both the clocks show the correct time?

Answer

1. Midnight after 10 days, which is 240 hours later. They both show 4 O'clock: one clock has gained

2. 40 minutes (4 hours) and the other lost 480 minutes (8 hours).

3. Midnight after 30 days, which is 720 hours later. They both now show 12 O'clock.

Marbles

You are filling various lengths of tubes with marbles. A yellow marble is 19 mm wide and a green marble is 21 mm wide. How many marbles of each color will exactly fill a tube that is 562 mm long?

Answer

13 yellow and 15 green marbles.

13*19=247

15*21=315

247+315-562

Rapid Readers

Heather, Ankit, Margaret, Kareem and Roger are each reading the same book for a school book report. The 12 chapters of the book are each

11 pages long.

Clues:

1. Heather planned to read half the book in 2 days. Now she's halfway towards the goal.

2. Ankit has read 4 chapters so far.

3. Margaret has read 20 pages past the halfway mark.

4. Kareem is 25 pages past the halfway mark.

5. Roger has only 2 chapters to go.

How many pages has each person read?

Answer

Heather has read 33 pages.

Ankit has read 44 pages.

Margaret has read 86 pages.

Kareem has read 91 pages.

Roger has read 110 pages

Bird Brains

If 3 thistled thrushes eat 3 packs

of birdseed in 3 weeks and
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packs of birdseedin4 py” agngaw
weeks and 6 coloured &§
cockatoos eat 6 packs
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Answer 3 thrushes eat 3 packs in 3 weeks.
3 thrushes eat 12 packs in 12 weeks.
12 thrushes eat 48 packs in 12 weeks.
4 finches eat 4 packs in 4 weeks.

4 finches eat 12 packs in 12 weeks.

12 finches eat 36 packs in 12 weeks.

6 cockatoos eat 6 packs in 6 weeks.

6 cockatoos eat 12 packs in 12 weeks.
12 cockatoos eat 24 packs in 12 weeks.
So 48+36+24 = 108 packs.

Solution: 108 packs.

Collection of Leaves

As Mr. Smith's birthday approaches, he starts to collect leaves. On the first day of the month, he collects one leaf; on the second day, he collects two; and so on. So by his birthday he'll have collected 276 leaves altogether. On which day of the month is Mr. Smith's birthday?

Doing the Maths on the Ever-Slowing Drive

You're driving your car on the highway at 75 mph. You notice a sign that says you are 75 miles from your destination. So if you continue driving at that speed, you'd be there in an hour.

When you have driven one mile and you are now 74 miles from your destination, you drop your speed down to 74 mph.

So, you drive that first mile at 75 mph; when you are 74 miles from your destination, you drop your speed down to 74 mph; and then 73 mph, 72 mph... and so on. Until, finally, you get down to 1 mile from your destination and you're driving at one mile per hour.

If you do this, how long is it going to take you to travel the entire 75 miles, rounding it to to the \ nearest hour? eas